FIG.1

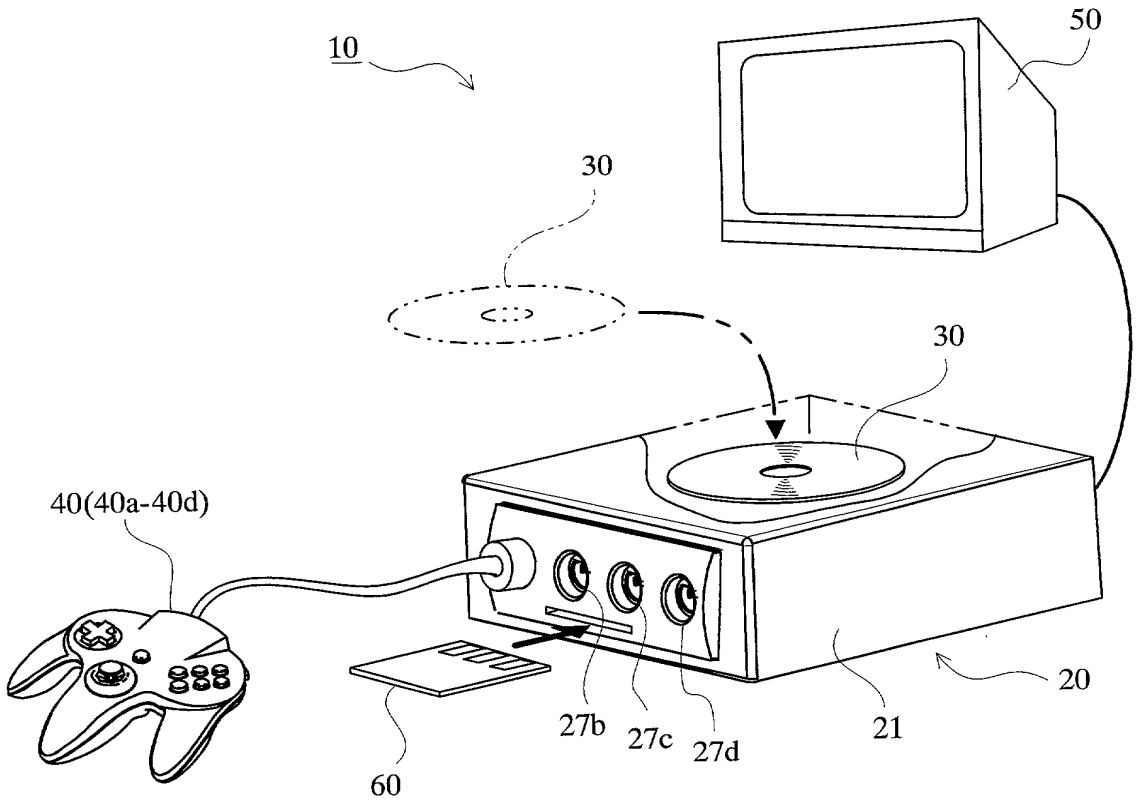


FIG.2

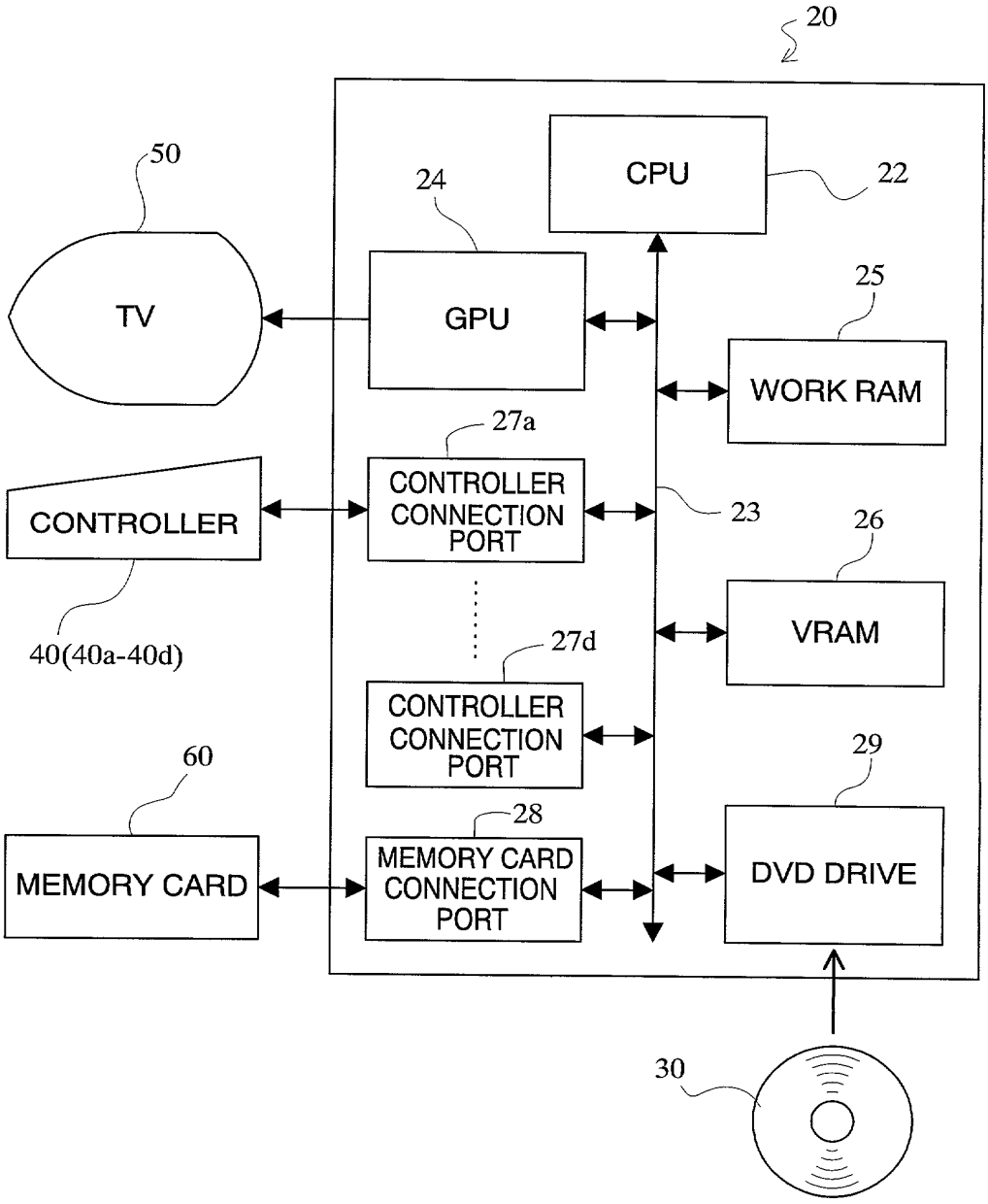
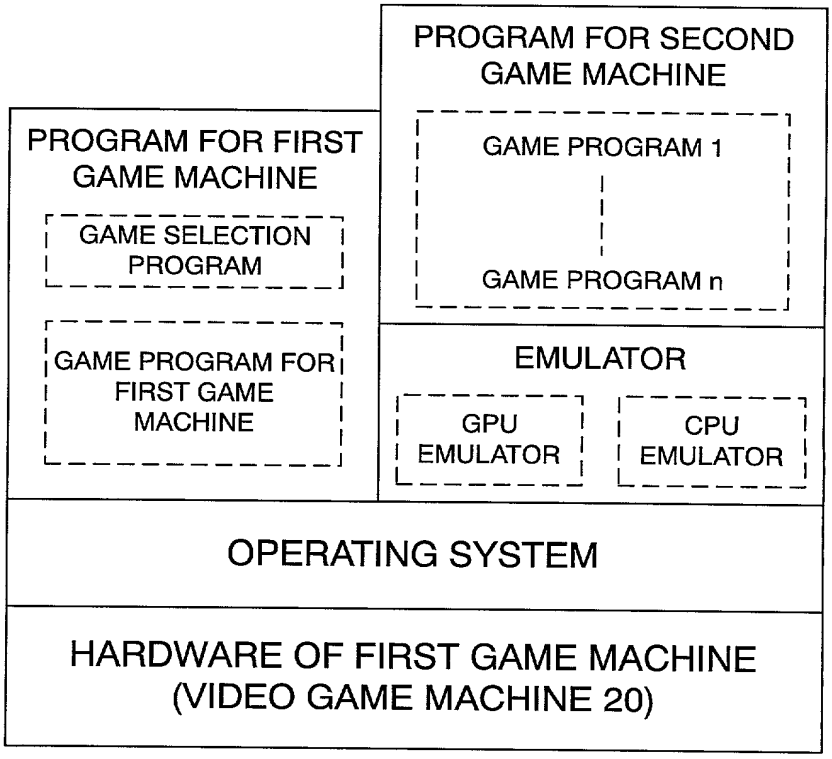
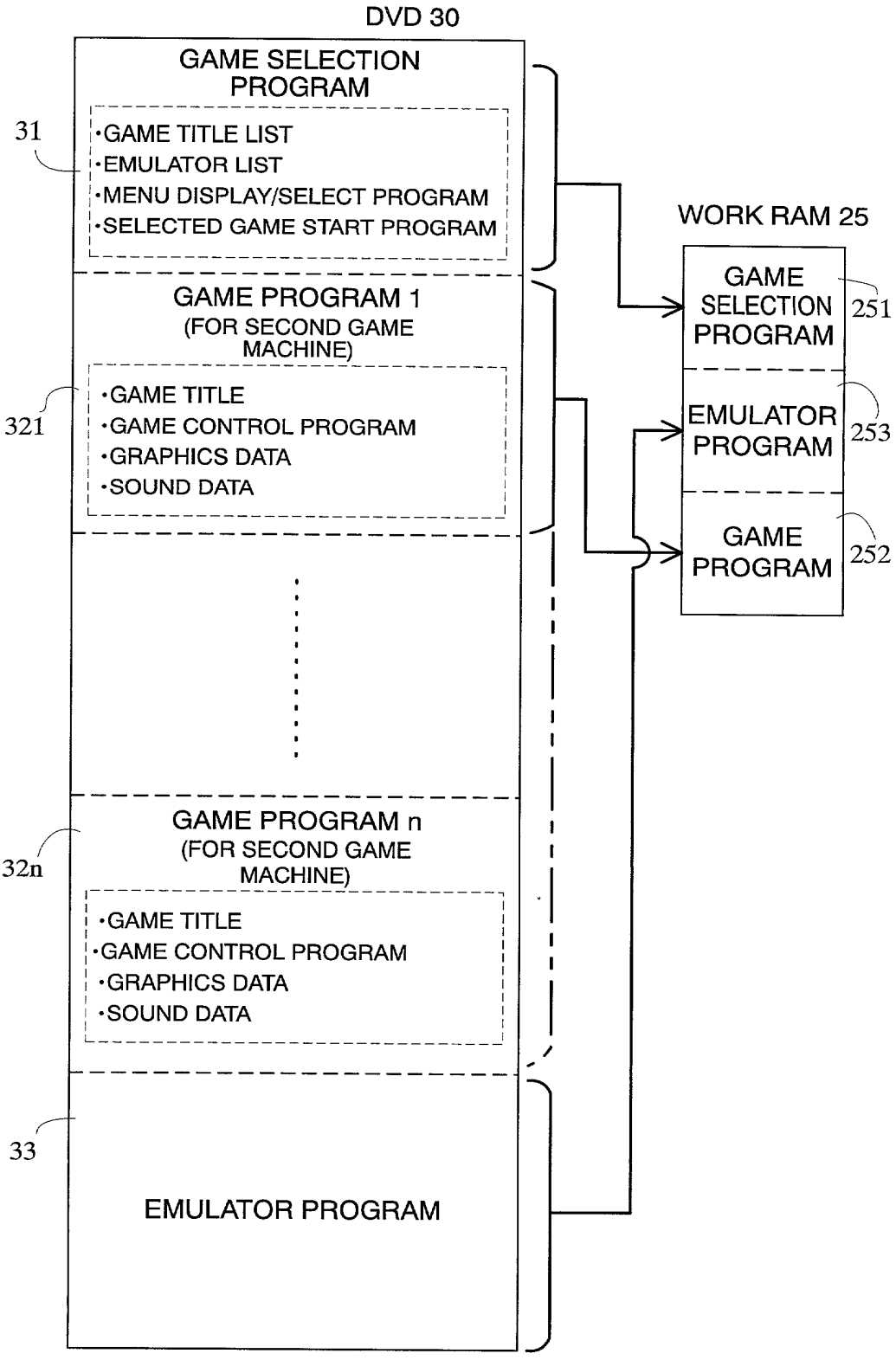

20
50
TV
24
GPU
CPU
22
25
WORK RAM
27a
CONTROLLER CONNECTION PORT
23
CONTROLLER
40(40a-40d)
26
VRAM
27d
CONTROLLER CONNECTION PORT
60
MEMORY CARD
28
MEMORY CARD CONNECTION PORT
29
DVD DRIVE
30

FIG.3



US 9,468,854 B2

FIG.4


DVD 30
GAME SELECTION PROGRAM
31
•GAME TITLE LIST
•EMULATOR LIST
•MENU DISPLAY/SELECT PROGRAM
•SELECTED GAME START PROGRAM
GAME PROGRAM 1
(FOR SECOND GAME MACHINE)
321
•GAME TITLE
•GAME CONTROL PROGRAM
•GRAPHICS DATA
•SOUND DATA
GAME PROGRAM n
(FOR SECOND GAME MACHINE)
32n
•GAME TITLE
•GAME CONTROL PROGRAM
•GRAPHICS DATA
•SOUND DATA
33
EMULATOR PROGRAM
WORK RAM 25
GAME SELECTION PROGRAM
251
EMULATOR PROGRAM
253
GAME PROGRAM
252

EP 1 020 090 A1

FIG.5A

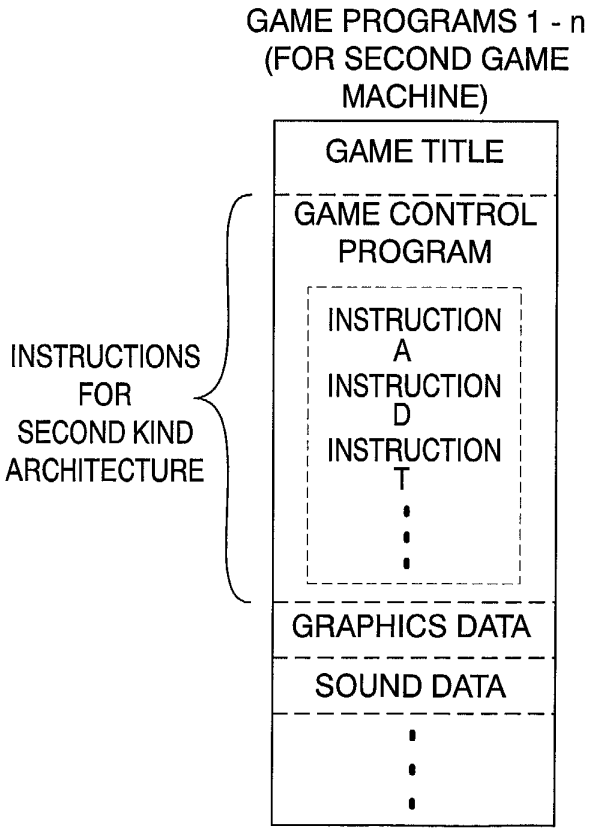


FIG.5B

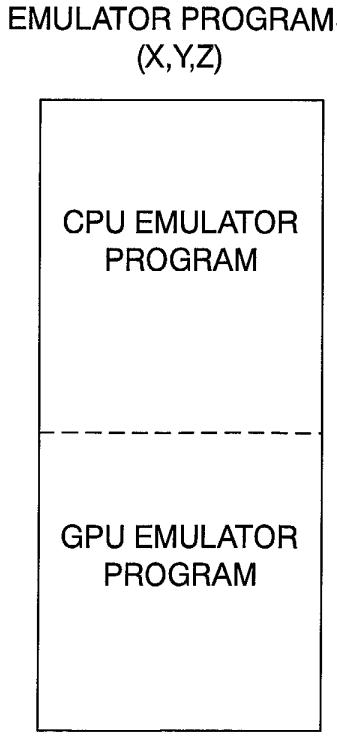


FIG.5C

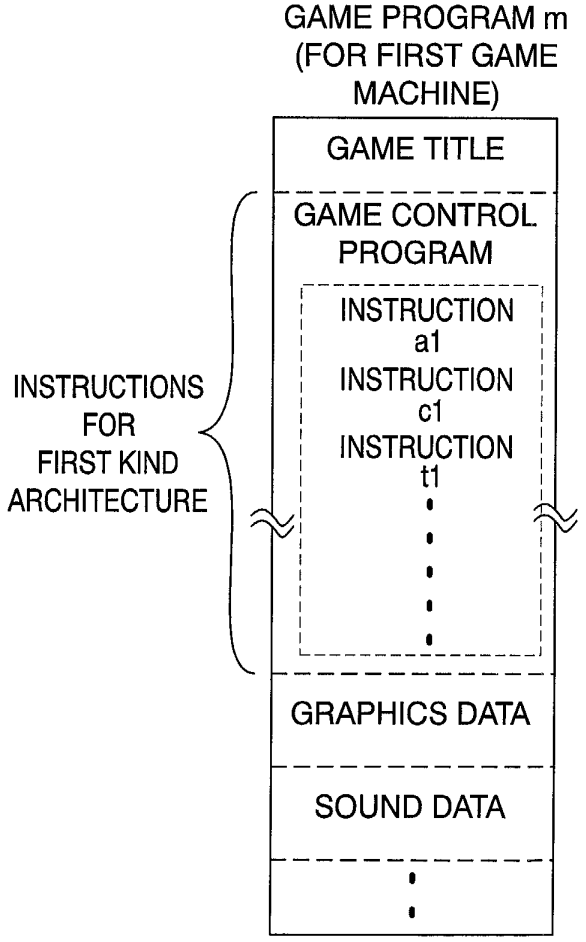


FIG.6

EMULATOR PROGRAM		
INSTRUCTIONS CONSTITUTING GAME PROGRAM FOR SECOND GAME MACHINE (INSTRUCTIONS OF SECOND KIND ARCHITECTURE)	CPU EMULATOR (INSTRUCTIONS OF FIRST KIND ARCHITECTURE)	GPU EMULATOR (INSTRUCTION OF FIRST KIND ARCHITECTURE)
INSTRUCTION A	PROCESSING a (INSTRUCTIONS a1,a2,a3)	——
INSTRUCTION B	PROCESSING b (INSTRUCTION b1)	——
⋮	⋮	⋮
INSTRUCTION J	PROCESSING j (INSTRUCTIONS j1,j2)	——
INSTRUCTION K + INSTRUCTION L	PROCESSING kl (INSTRUCTION kl1)	——
⋮	⋮	⋮
INSTRUCTION T (EXCLUSIVE INSTRUCTION FOR GPU)	——	PROCESSING t1 {PROCESSING t2 {PROCESSING t3 (INSTRUCTIONS t11,t12, . . .)
INSTRUCTION U (EXCLUSIVE INSTRUCTION FOR GPU)	——	PROCESSING u (INSTRUCTIONS u1,u2,u3)
⋮	⋮	⋮

FIG.7

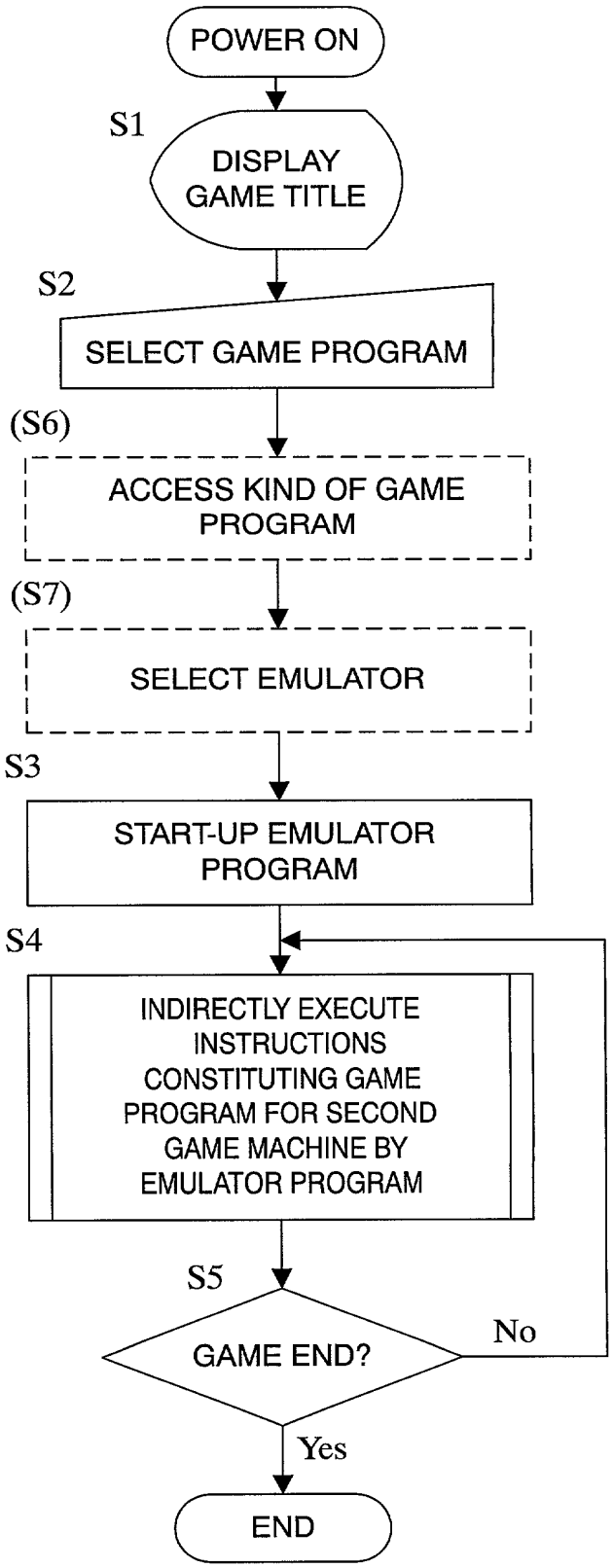
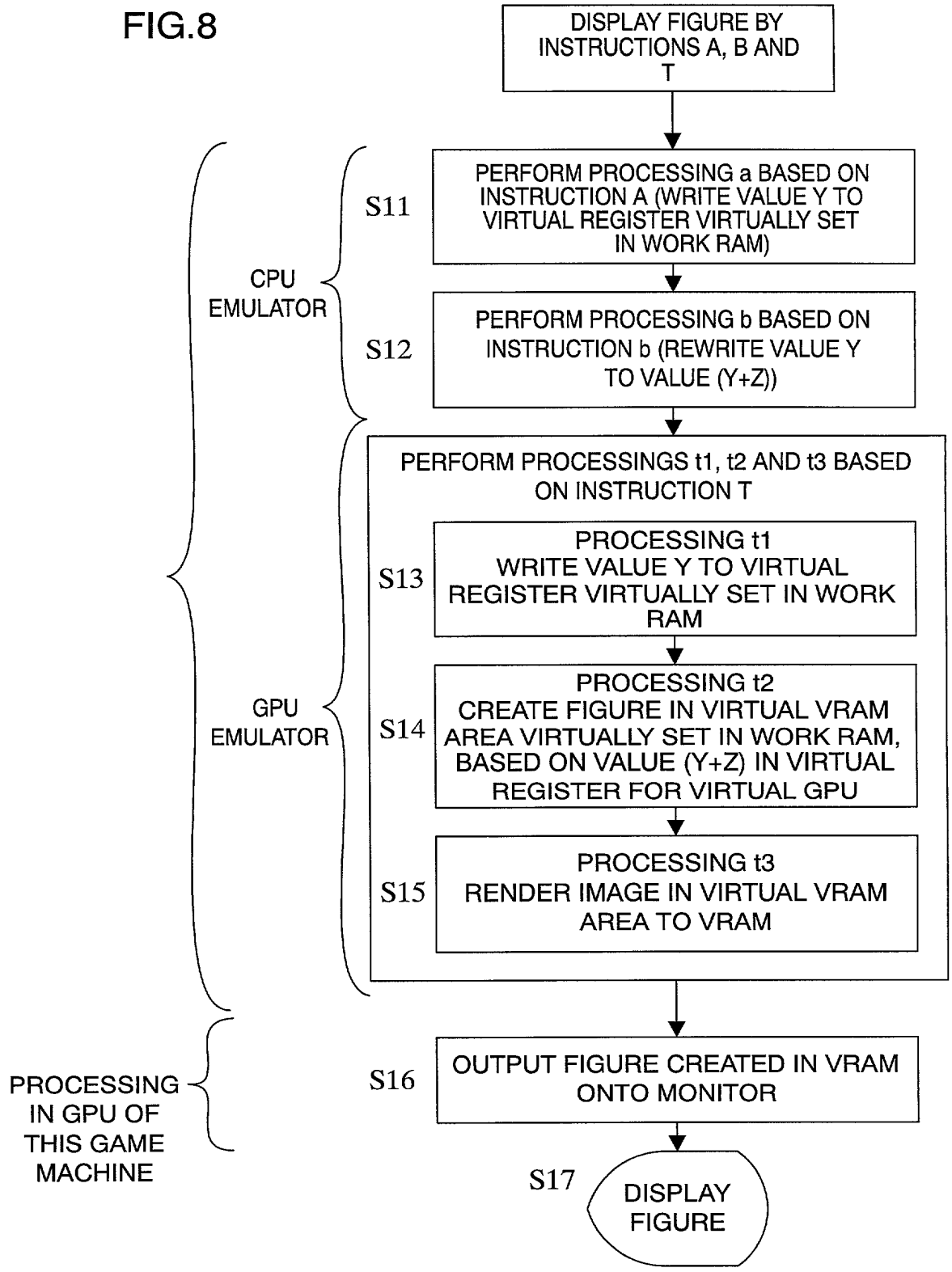

POWER ON
S1
DISPLAY GAME TITLE
S2
SELECT GAME PROGRAM
(S6)
ACCESS KIND OF GAME PROGRAM
(S7)
SELECT EMULATOR
S3
START-UP EMULATOR PROGRAM
S4
INDIRECTLY EXECUTE INSTRUCTIONS CONSTITUTING GAME PROGRAM FOR SECOND GAME MACHINE BY EMULATOR PROGRAM
S5
GAME END?
No
Yes
END

FIG.8



US 7,690,045 B2

JP2000-099462

FIG.9

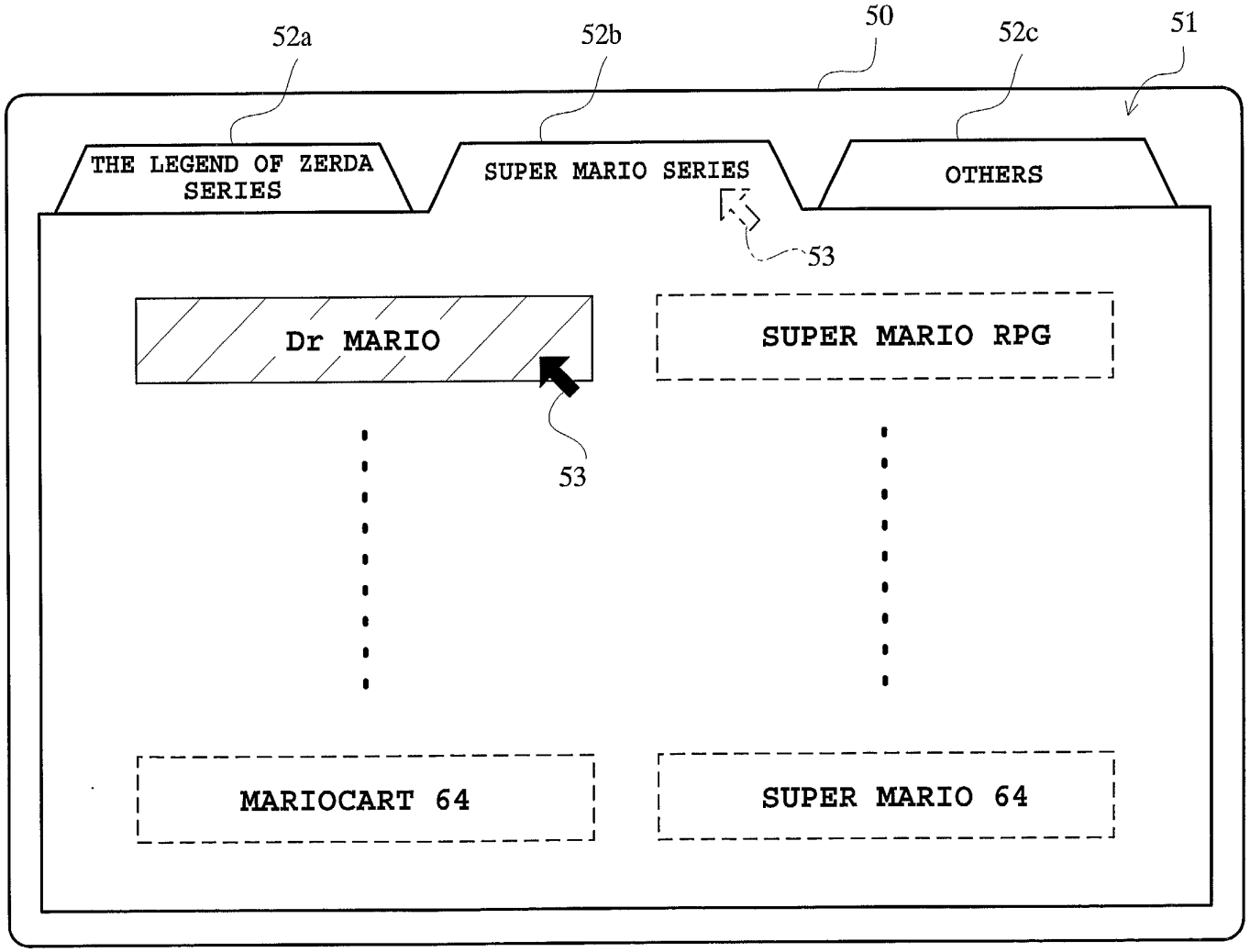


FIG.10

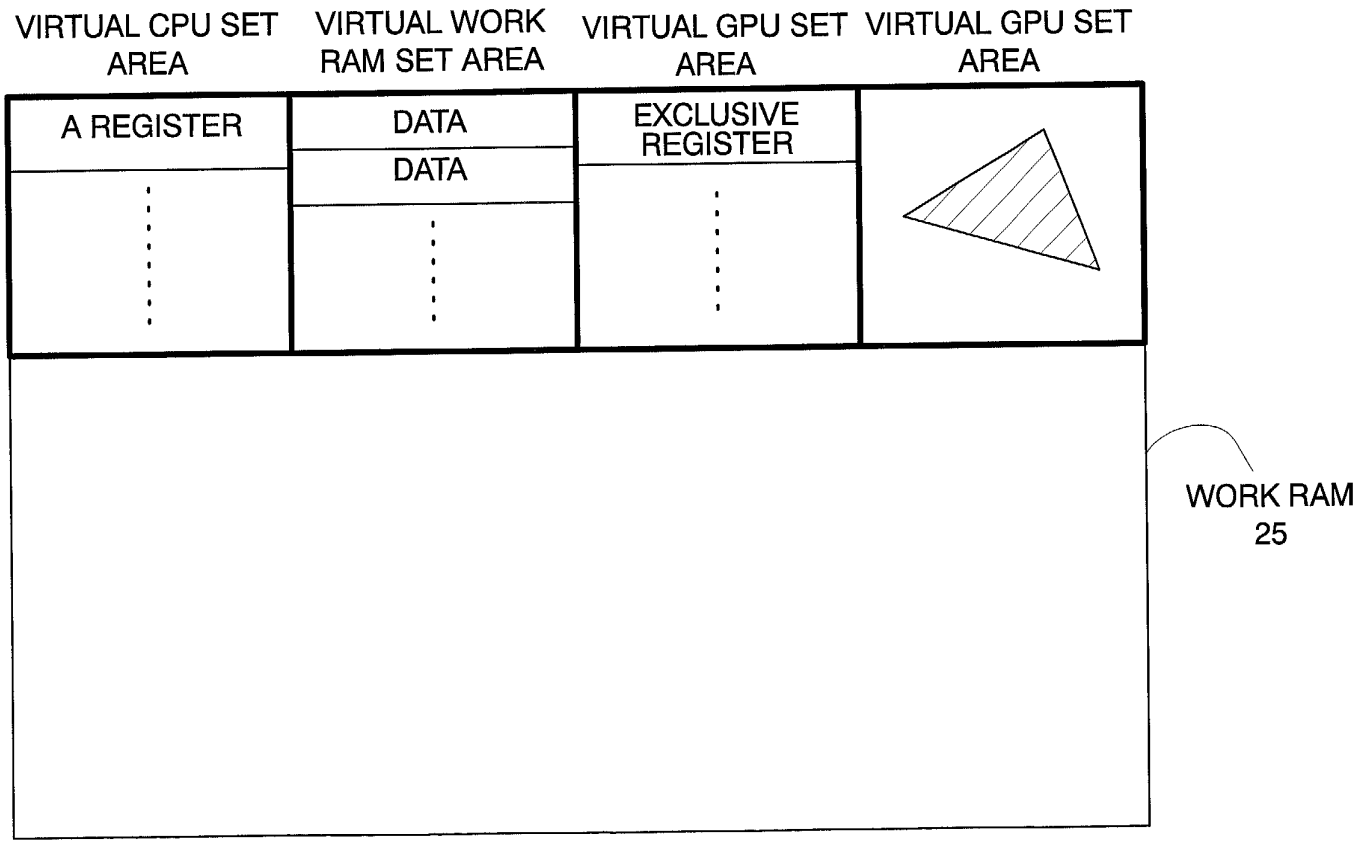
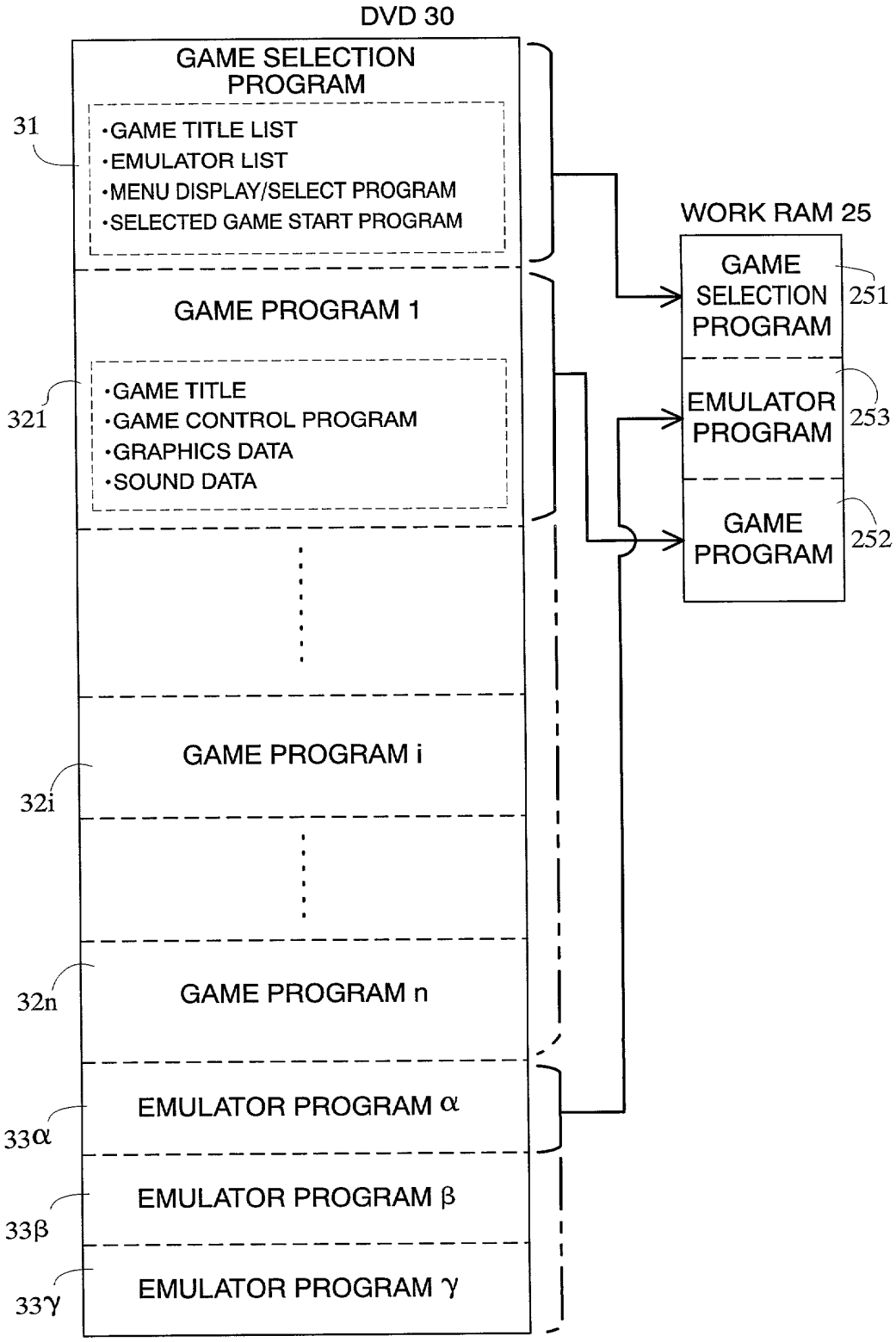

VIRTUAL CPU SET AREA
VIRTUAL WORK RAM SET AREA
VIRTUAL GPU SET AREA
VIRTUAL GPU SET AREA
A REGISTER
DATA
DATA
EXCLUSIVE REGISTER
WORK RAM 25

FIG.11


DVD 30
GAME SELECTION PROGRAM
31
•GAME TITLE LIST
•EMULATOR LIST
•MENU DISPLAY/SELECT PROGRAM
•SELECTED GAME START PROGRAM
GAME PROGRAM 1
321
•GAME TITLE
•GAME CONTROL PROGRAM
•GRAPHICS DATA
•SOUND DATA
GAME PROGRAM i
32i
GAME PROGRAM n
32n
EMULATOR PROGRAM α
33α
EMULATOR PROGRAM β
33β
EMULATOR PROGRAM γ
33γ
WORK RAM 25
GAME SELECTION PROGRAM
251
EMULATOR PROGRAM
253
GAME PROGRAM
252

JP 2020-099427 A

FIG.12A

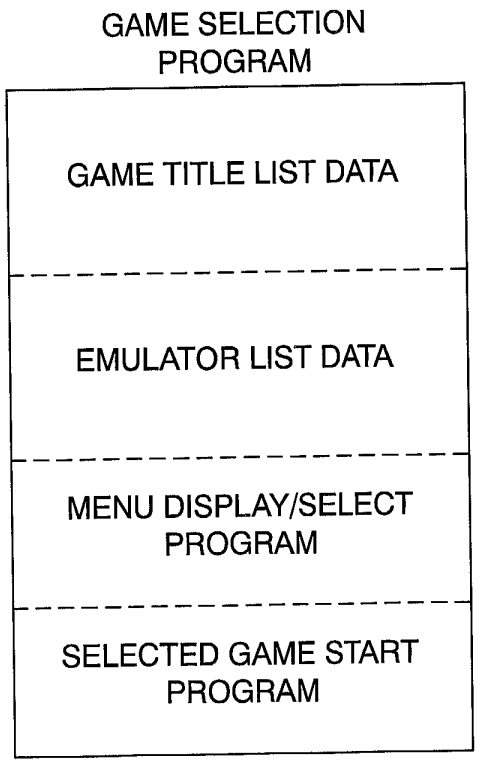


FIG.12B

GAME TILE LIST DATA	EMULATOR LIST DATA
GAME TITLE 1	EMULATOR α
⋮	⋮
GAME TITLE i	EMULATOR β
⋮	⋮
GAME TITLE n	EMULATOR γ
GAME TITLE m	—

FIG.13

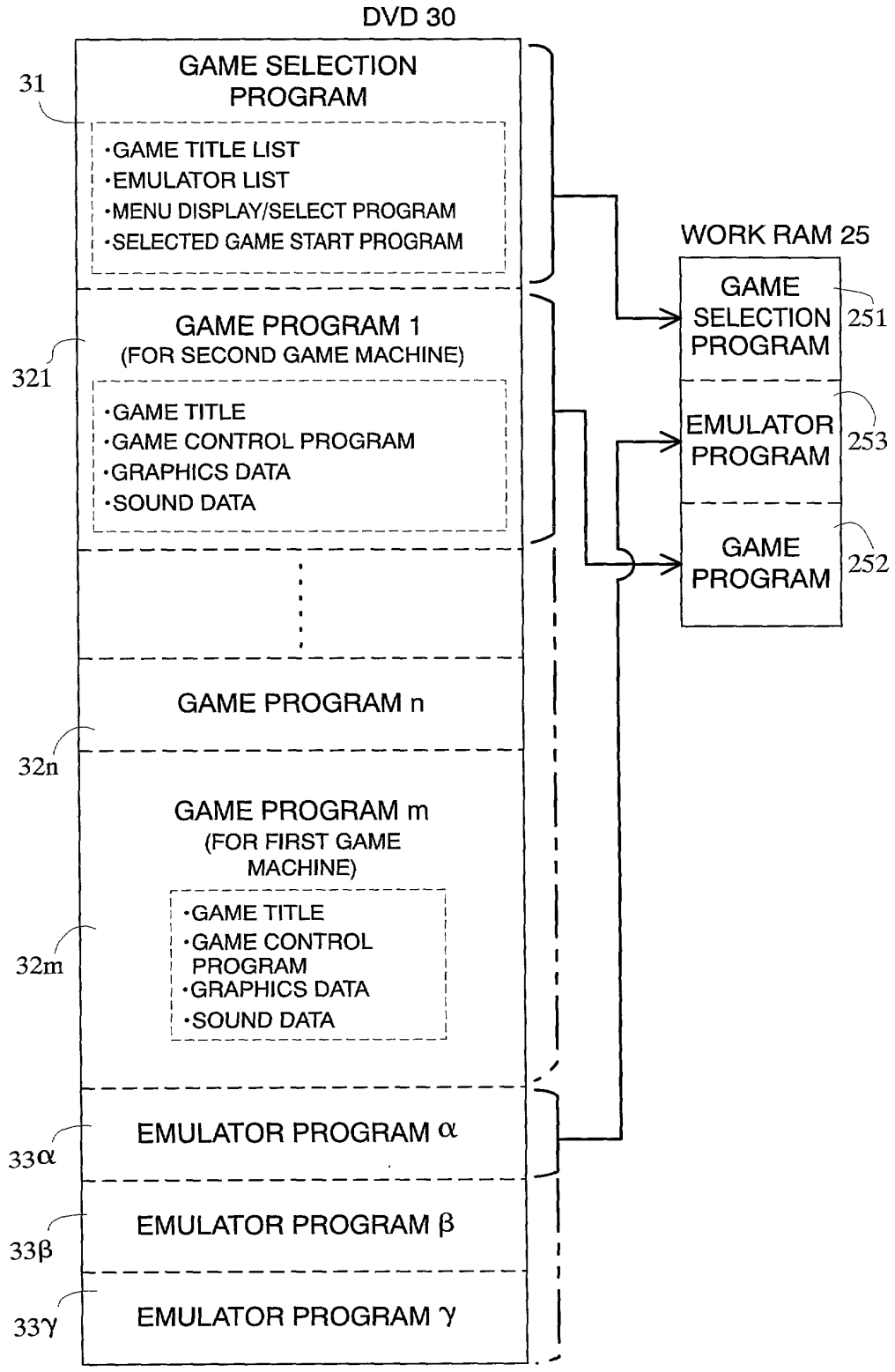
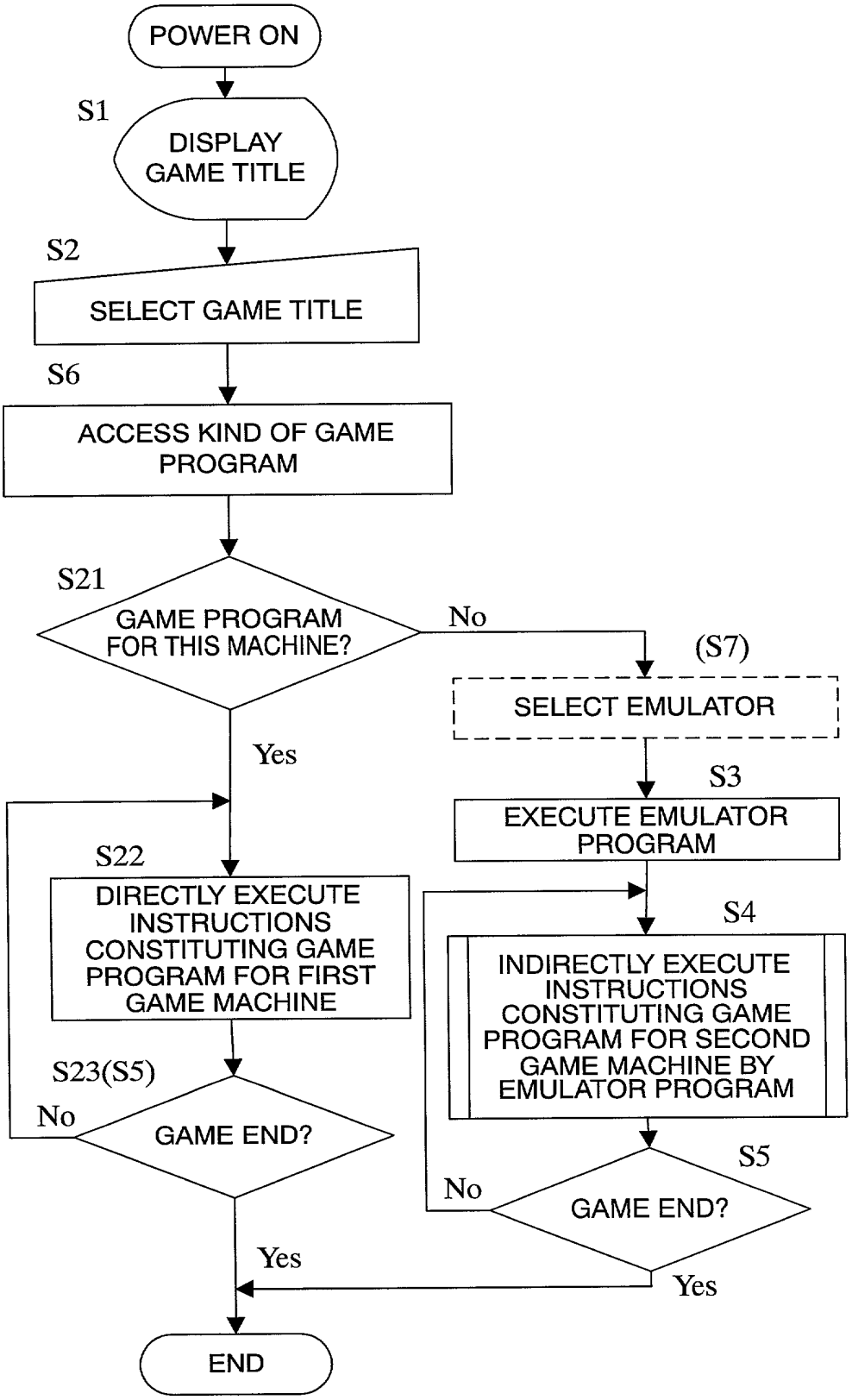

DVD 30
31
GAME SELECTION PROGRAM
·GAME TITLE LIST
·EMULATOR LIST
·MENU DISPLAY/SELECT PROGRAM
·SELECTED GAME START PROGRAM
321
GAME PROGRAM 1
(FOR SECOND GAME MACHINE)
·GAME TITLE
·GAME CONTROL PROGRAM
·GRAPHICS DATA
·SOUND DATA
GAME PROGRAM n
32n
GAME PROGRAM m
(FOR FIRST GAME MACHINE)
32m
·GAME TITLE
·GAME CONTROL PROGRAM
·GRAPHICS DATA
·SOUND DATA
EMULATOR PROGRAM α
33α
EMULATOR PROGRAM β
33β
EMULATOR PROGRAM γ
33γ
WORK RAM 25
GAME SELECTION PROGRAM
251
EMULATOR PROGRAM
253
GAME PROGRAM
252

FIG.14



US 7,460,120 B2

FIG.15

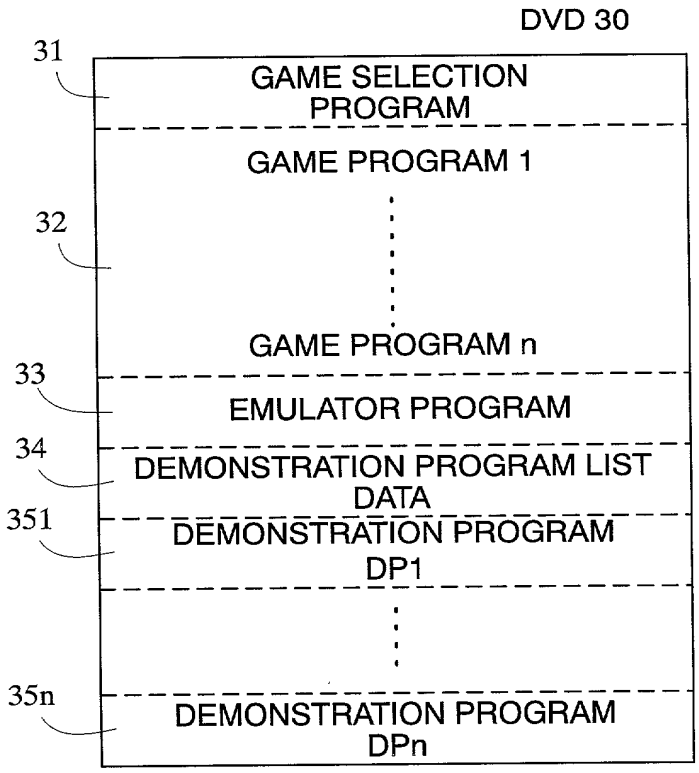


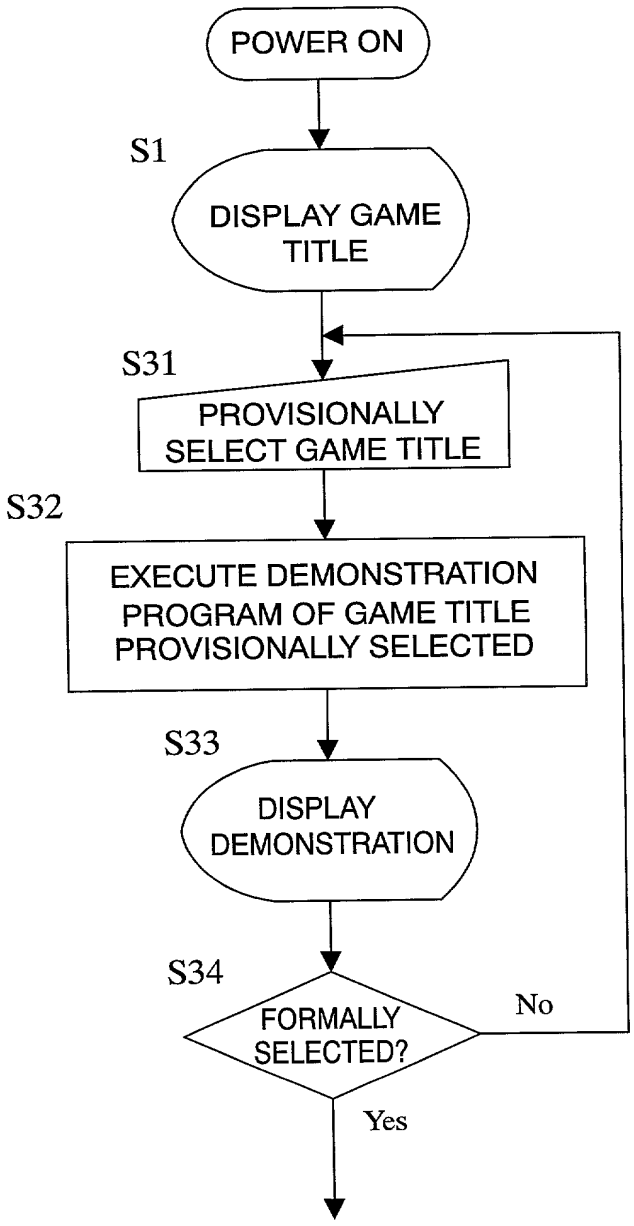
FIG.16

DEMONSTRATION PROGRAM LIST DATA

GAME TITLE	DEMONSTRATION PROGRAM
GAME TITLE 1	DEMONSTRATION PROGRAM DP1
⋮	⋮
GAME TITLE i	DEMONSTRATION PROGRAM DP i
⋮	⋮
GAME TITLE n	DEMONSTRATION PROGRAM DPn

EP 0 974 890 A2

FIG.17


POWER ON
S1
DISPLAY GAME TITLE
S31
PROVISIONALLY SELECT GAME TITLE
S32
EXECUTE DEMONSTRATION PROGRAM OF GAME TITLE PROVISIONALLY SELECTED
S33
DISPLAY DEMONSTRATION
S34
FORMALLY SELECTED?
No
Yes
SAME AS S3(S6)-S5 OF FIGURE 7

TOTO20" 09SM2260

FIG.18

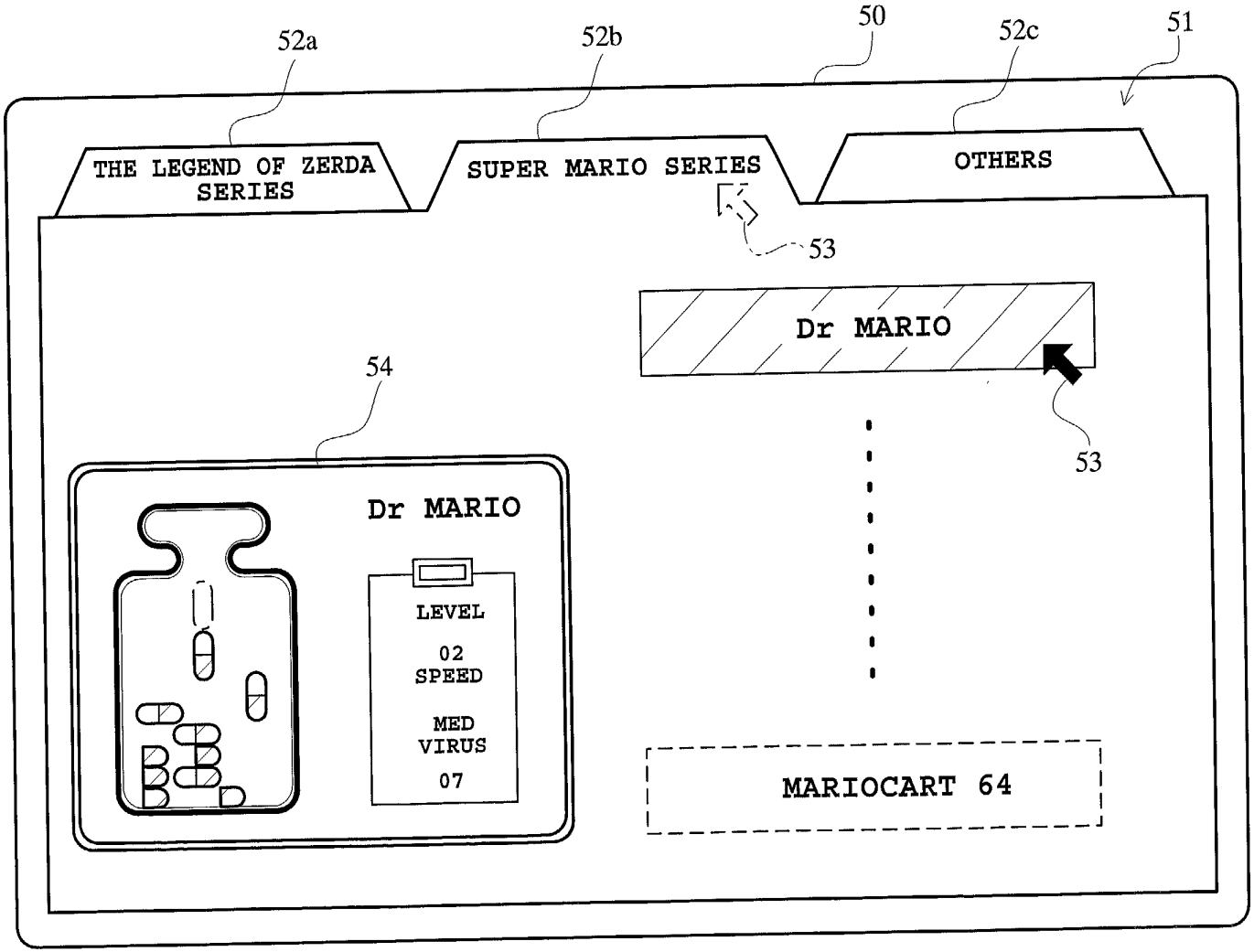
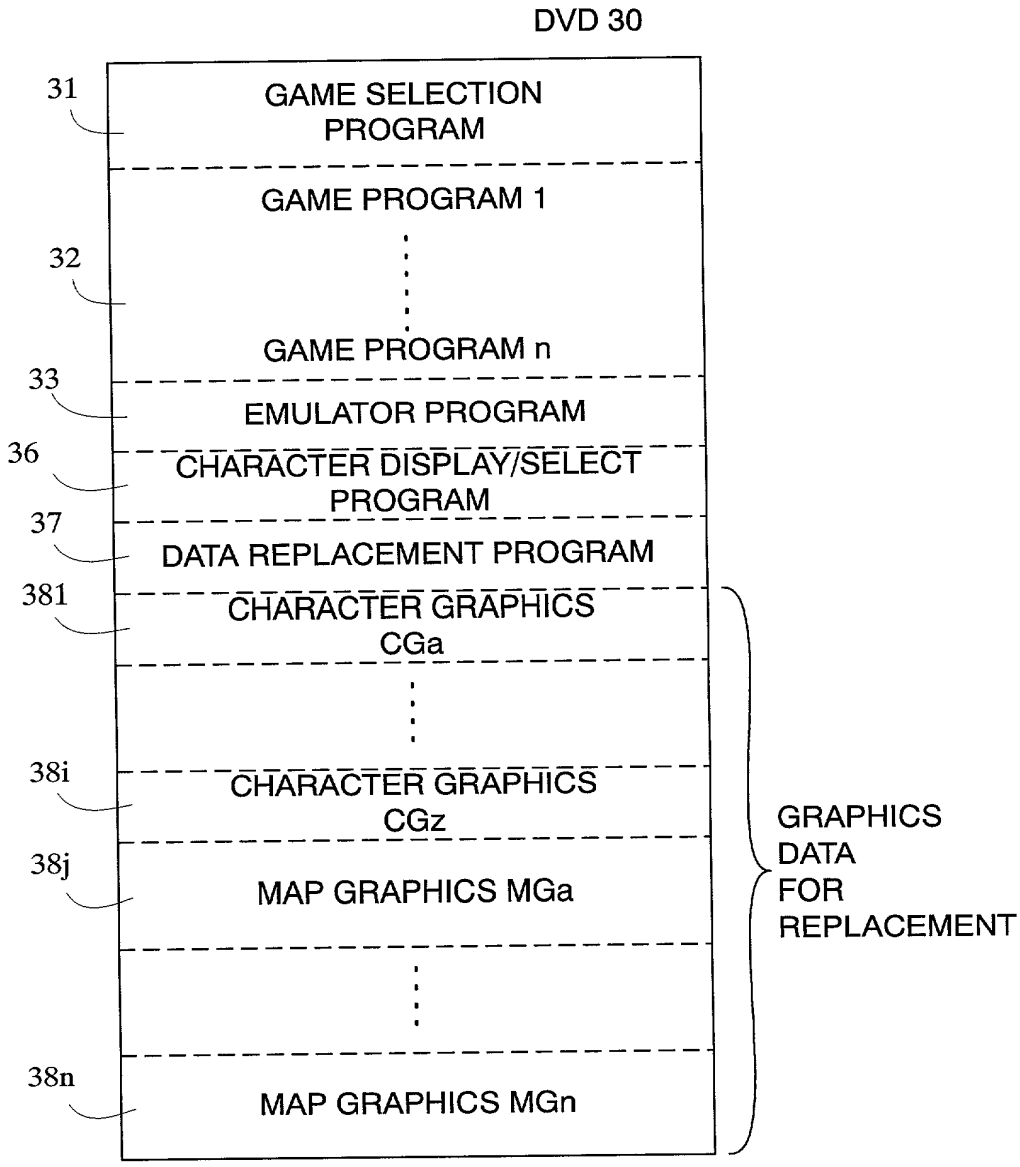


FIG.19


DVD 30
31
GAME SELECTION PROGRAM
GAME PROGRAM 1
32
GAME PROGRAM n
33
EMULATOR PROGRAM
36
CHARACTER DISPLAY/SELECT PROGRAM
37
DATA REPLACEMENT PROGRAM
381
CHARACTER GRAPHICS CGa
38i
CHARACTER GRAPHICS CGz
38j
MAP GRAPHICS MGa
38n
MAP GRAPHICS MGn
GRAPHICS DATA FOR REPLACEMENT

TOTO20"09947760

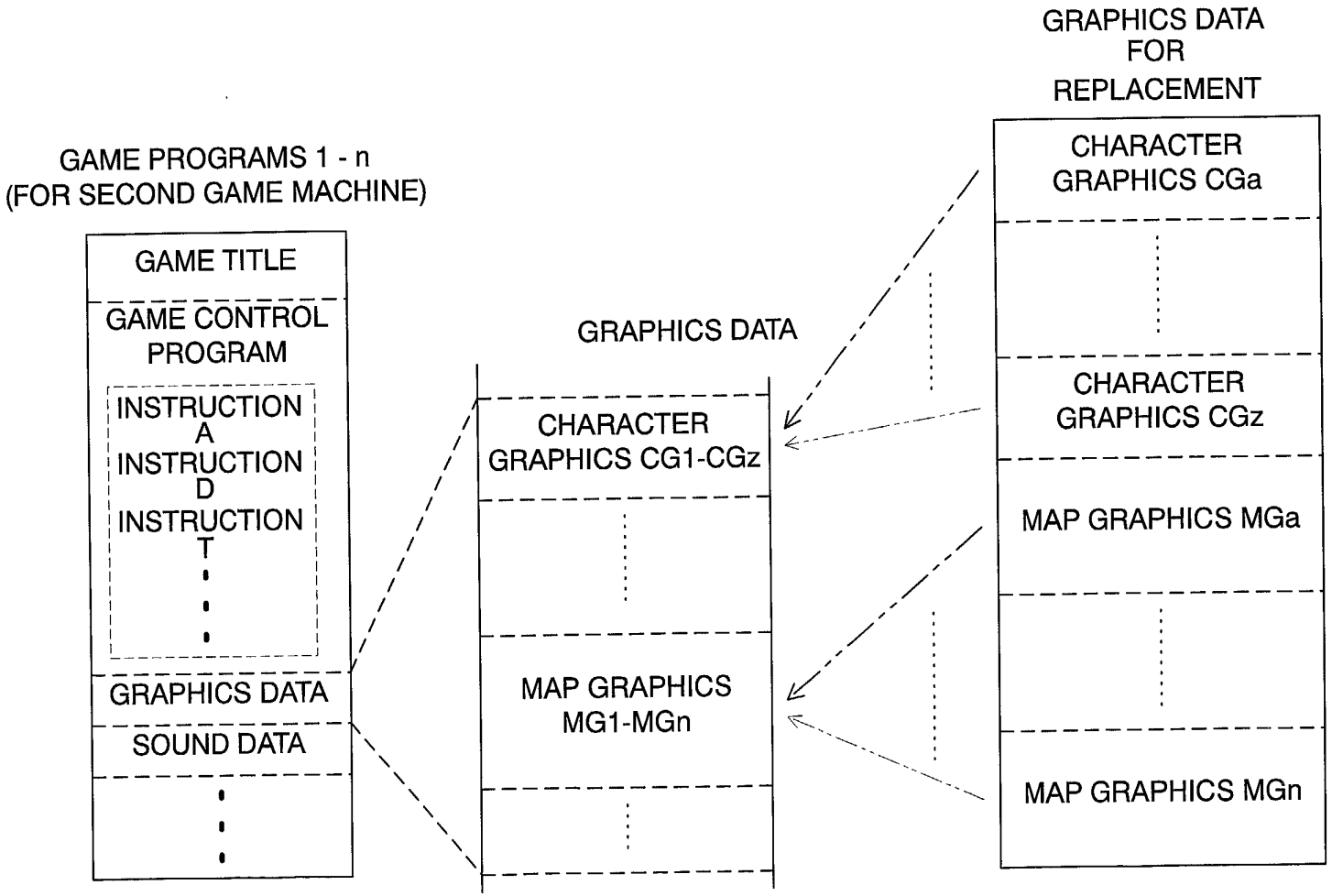
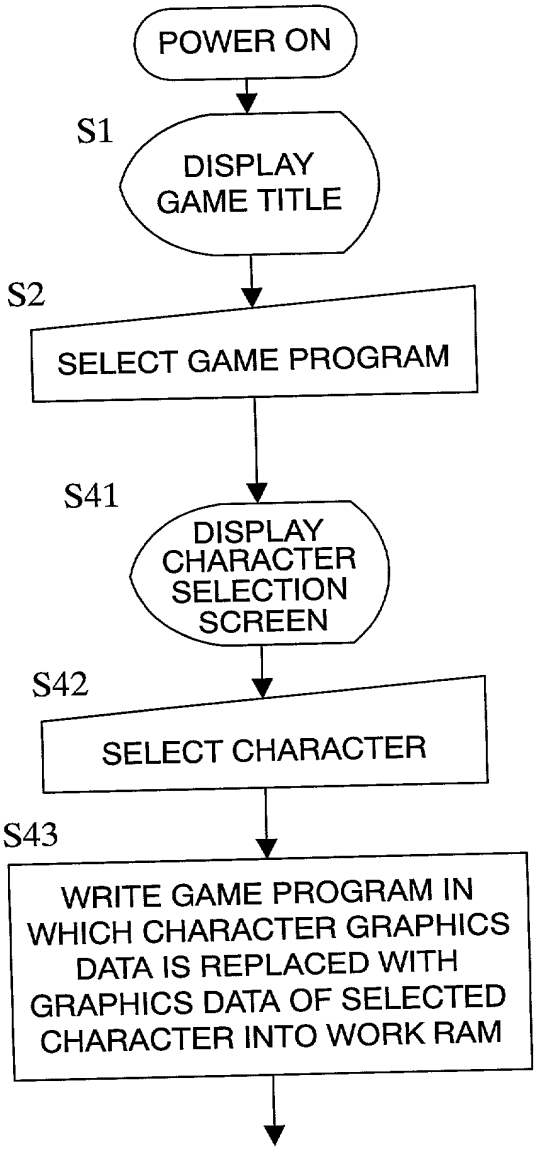


FIG.20A FIG.20B FIG.20C

FIG.21



SAME AS S3(S6)-S5 OF FIGURE 7

EP 0 926 628 A2

TOTO20"0994760

FIG.22

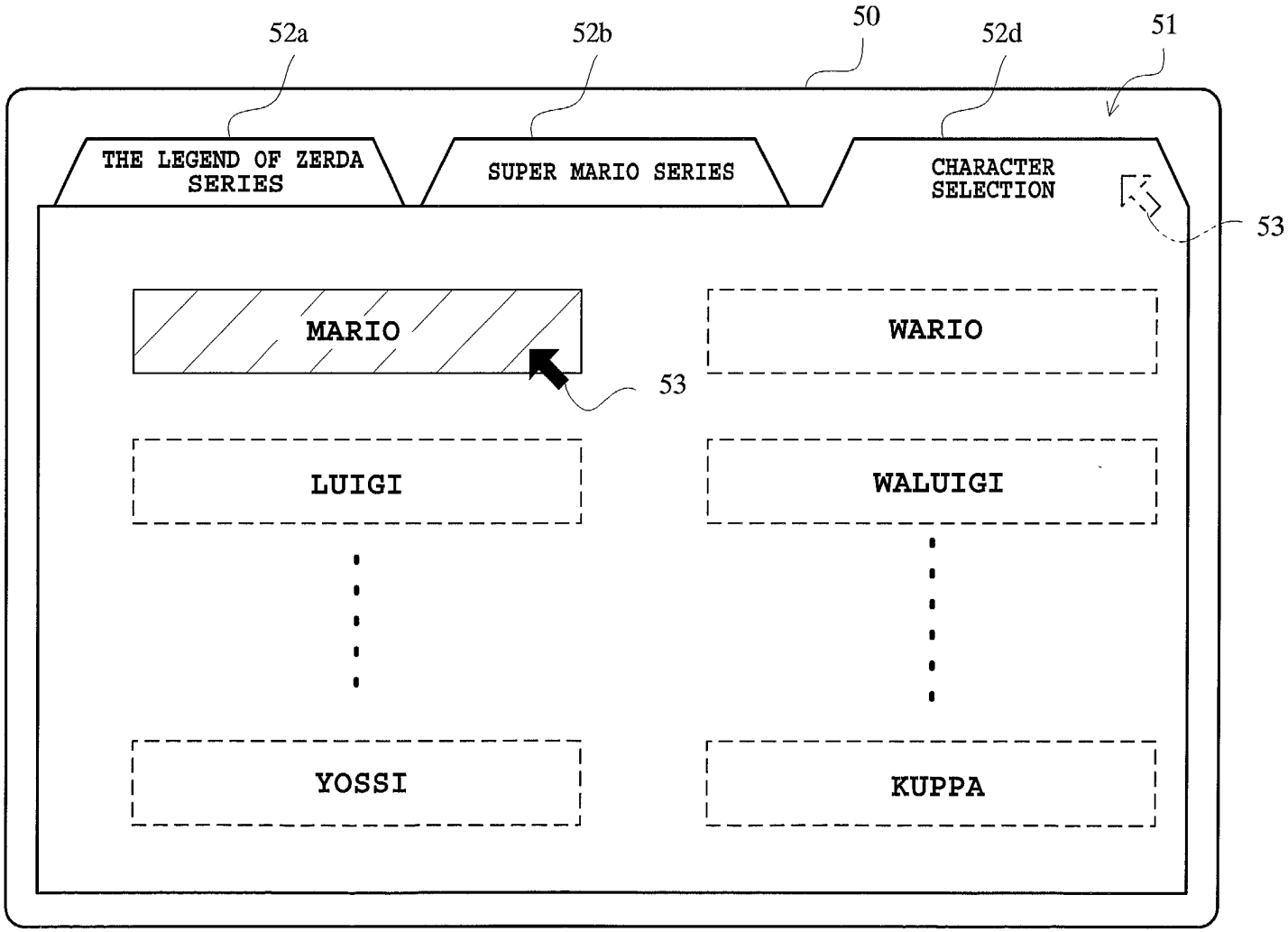
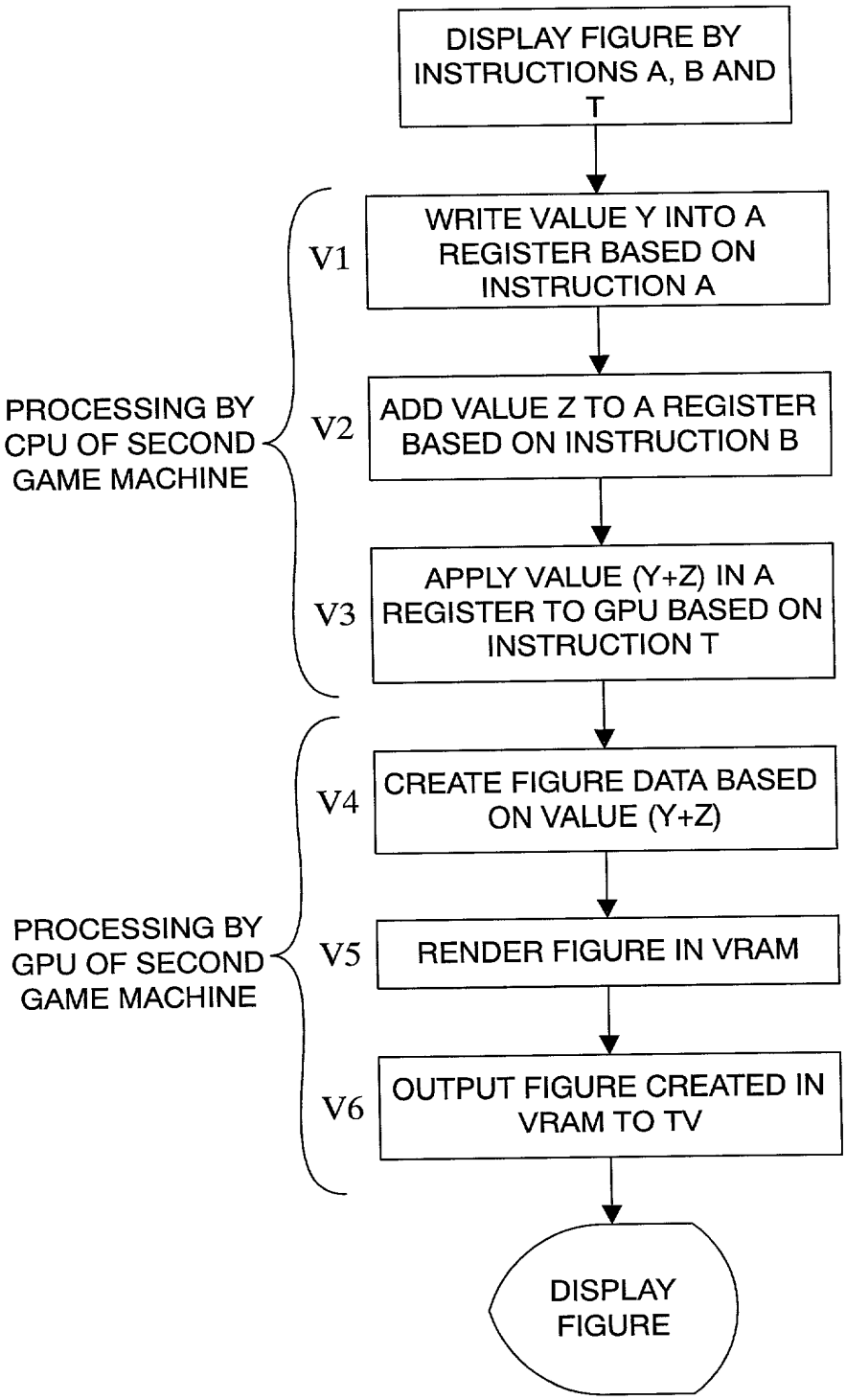


FIG.23



US 7,460,125 B2